

# GILA RIVER BASIN

## 09482500 SANTA CRUZ RIVER AT TUCSON, AZ

**LOCATION**--Lat 32°13'19", long 110°58'52", in SE1/4SE1/4 sec. 11, T.14 S., R.13 E., Pima County, Hydrologic Unit 15050301, on right bank, 300 ft downstream from Congress Street Bridge, in Tucson.

**DRAINAGE AREA**--2,222 mi<sup>2</sup>, of which 395 mi<sup>2</sup> is in Mexico, adjusted for 15.2 mi<sup>2</sup> of Tucson Arroyo drainage area contributing to this station effective July 1956.

**PERIOD OF RECORD**--Oct. 1905 to Sept. 1981 (monthly discharge only, Jan. 1907 to Sept. 1912, Jan. to Sept. 1914), June 1986 to Sept. 1995 (discharge above 500 ft<sup>3</sup>/s only), Oct. 1995 to current year.

**REVISED RECORDS**--WSP 859: 1915(M). WSP 1283: Drainage area. WSP 1313: 1939(M). WDR AZ--88--1: 1986--87(M).

**GAGE**--Water-stage recorder and crest-stage gage. Datum of gage is 2,320.68 ft above sea level. Prior to Nov. 27, 1929, nonrecording gages or reference points for measuring to water surface at various places on Congress Street bridge at various datums. Nov. 27, 1929 to Sept. 30, 1981, water-stage recorder at Congress Street bridge: at datum 6.22 ft higher Nov. 27, 1929 to June 18, 1958; at datum 2.22 ft higher June 18, 1958 to May 21, 1963; at datum 3.48 ft lower May 21, 1963 to Oct. 27, 1970; at datum 2.86 ft lower Oct. 1, 1971, to Sept. 30, 1981. No gage Oct. 27, 1970 to Oct. 1, 1971, and Oct. 10, 1977, to Feb. 14, 1978.

**REMARKS**--Records fair, except for estimated daily discharges which are poor. Irrigation above station of about 26,000 acres, including about 2,300 acres in Mexico, mostly by pumping from ground water. Ground water is also pumped above the station for municipal supply and mining. From Oct. 1969 to Sept. 1981, all flow past station was published, including waste water when known.

**EXTREMES FOR PERIOD OF RECORD**--Maximum discharge, 37,400 ft<sup>3</sup>/s Jan. 19, 1993, gage height, 11.67 ft; no flow for most of each year.

**EXTREMES OUTSIDE PERIOD OF RECORD**--Maximum discharge since at least 1892, 52,700 ft<sup>3</sup>/s, from slope-area measurement of peak flow, Oct. 2, 1983; gage height, 22.2 ft, from floodmark, at site and datum used in 1981.

Maximum discharge during the 1985 water year was 10,000 ft<sup>3</sup>/s Dec. 28, 1984; gage height, 12.5 ft, at site and datum used in 1981.

**EXTREMES FOR CURRENT YEAR**--Peak discharges greater than base discharge of 1,700 ft<sup>3</sup>/s and (or) maximum (\*):

Date	Time	Discharge (ft <sup>3</sup> /s)	Gage height (ft)
Aug. 5.....	1815	1,930	4.11
Sept. 6.....	2130	*5,640	*5.84
Sept. 10.....	1645	2,840	4.65

Minimum daily discharge, no flow for many days.

### DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.54	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e21	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e8.6	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e85	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	22	e567
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e1.9	99
8	e0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.00	47
9	e0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e1.4	18
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e7.9	374
11	0.00	0.00	e5.9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	211
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e1.3
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e13	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e1.1	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e0.99	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e1.2	0.00	0.00
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e1.9	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e30	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e7.7	0.00	0.00
24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e9.9	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	117	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	e5.7	e2.1	0.00
29	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	15	0.00
30	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	0.00	0.00	12	0.00
31	0.00	---	0.00	0.00	---	0.00	---	0.00	---	0.00	e0.00	---
TOTAL	0.80	0.00	5.90	0.00	0.00	0.00	0.00	0.00	0.00	187.39	178.54	1317.30
MEAN	0.026	0.000	0.190	0.000	0.000	0.000	0.000	0.000	0.000	6.045	5.759	43.91
MAX	0.50	0.00	5.9	0.00	0.00	0.00	0.00	0.00	0.00	117	85	567
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MED	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AC-FT	1.6	0.00	12	0.00	0.00	0.00	0.00	0.00	0.00	372	354	2610
CFSM	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02

### STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1997 - 2002, BY WATER YEAR (WY)

	MEAN	88.75	21.31	0.038	0.092	0.436	0.289	1.246	0.000	6.280	34.36	22.45	5.609
MAX	355	85.1	0.069	0.28	0.79	0.45	3.63	0.000	18.8	84.2	43.6	12.5	
(WY)	2001	2001	1999	2001	2000	2000	1999	1999	2000	1999	1999	1999	
MIN	0.000	0.000	0.000	0.000	0.074	0.16	0.000	0.000	0.000	1.10	1.58	0.002	
(WY)	1999	2000	2000	1999	2001	1999	2000	1999	1999	2001	2001	2001	

### SUMMARY STATISTICS

#### FOR 2001 CALENDAR YEAR

#### FOR 2002 WATER YEAR

#### WATER YEARS 1997 - 2002

ANNUAL TOTAL	656.74	1689.93	
ANNUAL MEAN	1.799	4.630	18.55
HIGHEST ANNUAL MEAN			37.4
LOWEST ANNUAL MEAN			5.99
HIGHEST DAILY MEAN	110	567	7360
LOWEST DAILY MEAN	0.00	0.00	0.00
ANNUAL SEVEN-DAY MINIMUM	0.00	0.00	0.00
ANNUAL RUNOFF (AC-FT)	1300	3350	13440
ANNUAL RUNOFF (CFSM)	0.001	0.002	0.008
10 PERCENT EXCEEDS	0.44	0.00	1.4
50 PERCENT EXCEEDS	0.00	0.00	0.00
90 PERCENT EXCEEDS	0.00	0.00	0.00

e Estimated